Date: 10th July 2026

141742/VO/2024 WOODVILLE RESOURCE CENTRE, MANCHESTER AIR SOURCE HEAT PUMP NOISE TEST

1. INTRODUCTION

1.1. BACKGROUND & OBJECTIVES

E3P have undertaken a Noise Test for the installed Air Source Heat Pumps (ASHPs) at the Woodville Resource Centre as part of the approved planning application (141742/VO/2024). Specifically, the noise test was conducted in order to satisfy condition 4:

> *4) a) The development hereby approved shall be carried out in accordance with 'Supporting Information- Noise Impact Assessment- R2329-REP01F-JW (dated 19 March 2025)', stamped as received by the City Council as Local Planning Authority on 20 March 2025, in relation to details of externally mounted ancillary plant, equipment and servicing.*
>
> *The approved scheme shall be implemented prior to the first occupation of the development and thereafter retained and maintained in situ.*
>
> *b) Prior to the operation of the agreed details set out within part a) above, a verification report shall be submitted to and approved in writing by the City Council as local planning authority to validate that the work undertaken throughout the development conforms to the recommendations and requirements in the approved acoustic report. The report shall also undertake post completion testing to confirm that the noise criteria have been met. Any instances of non-conformity with the recommendations in the report shall be detailed along with any measures required to ensure compliance with the agreed noise criteria.*
>
> *Reason - To minimise the impact of plant on the occupants of the development pursuant to policies SP1 and DM1 of the Manchester Core Strategy (2012) and saved policy DC26 of the Unitary Development Plan for the City of Manchester (1995).*

As such, E3P attended site, once the ASHPs were operational to conduct source measurements of noise and to compare the results to the predicted noise levels in the Noise Impact Assessment noted above.

This note has been completed by Ollie Harrison, Acoustic Consultant at E3P and reviewed and authorised by Lee Faulkner, Associate Director at E3P and full corporate member of the Institute of Acoustics.

2. APPROVED DETAILS AND NIA OUTCOME

E3P note that that assessment assessed the ASHP noise in accordance with supplied manufacturer information and with an acoustic enclosure in place.

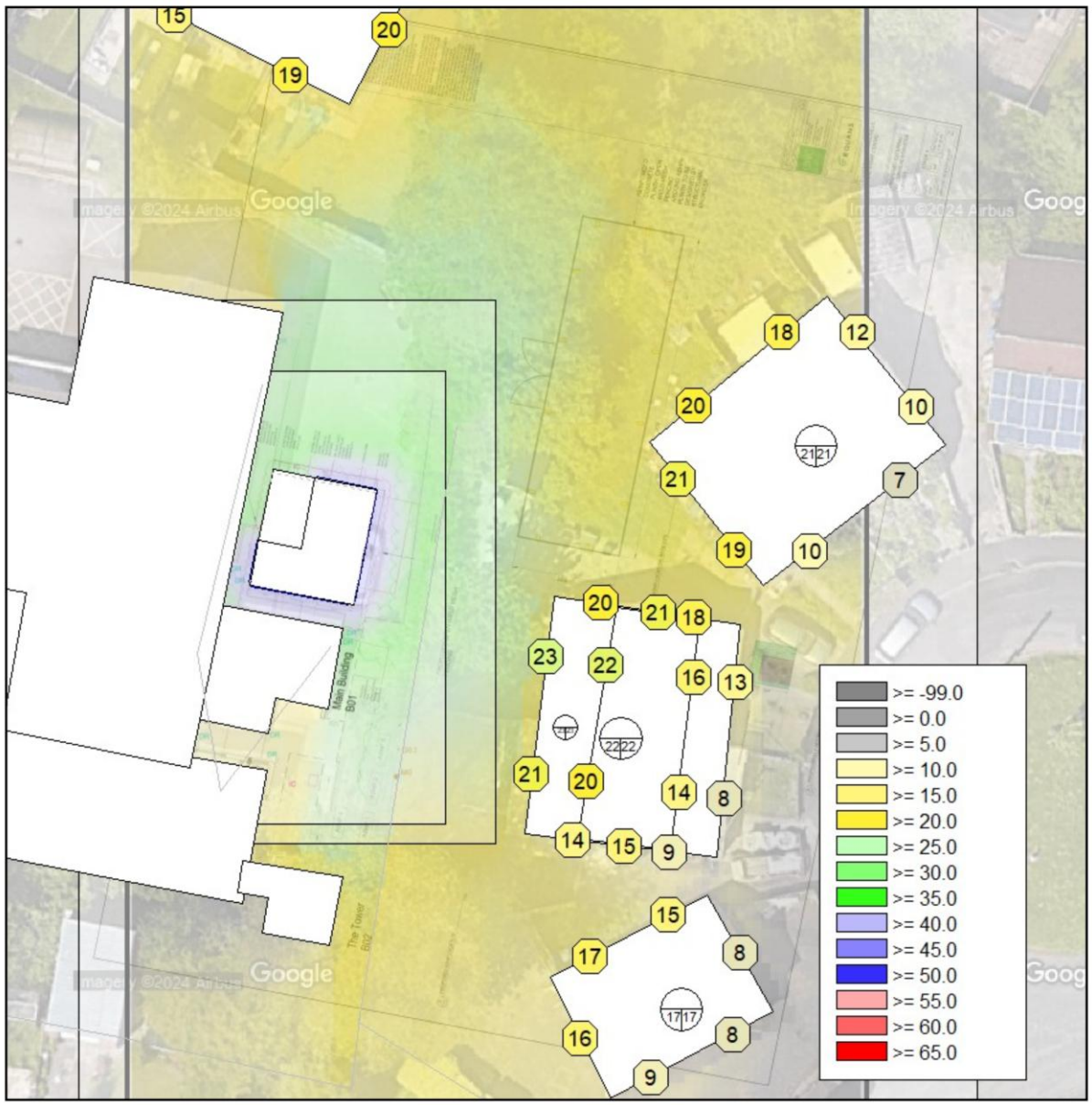
E3P can confirm the enclosure has been constructed as noted in the NIA with acoustic louvred panels.

The NIA found:

> *The assessment concludes that, following acoustic advice throughout the mechanical plant selection and design process there is a likelihood of low impact due to the proposed installation.*

Indeed, E3P note that noise from the installation was estimated to be approximately 45 to 50 dB around the perimeter of the enclosure, as noted in Figure 5.1 of page 16 of the NIA, reproduced below:

Figure 5.1: Predicted Specific Sound Level (dBA)



Although not entirely clear and accurate, E3P note that noise levels around the perimeter of the site are mid green to dark green, suggesting noise levels of between 30 and 35 dB within 3-5 m of the façade of the enclosure.

3. NOISE TEST RESULTS

E3P visited site during a typical weekday period when the site is open. The operator of the site ensured that heating and/cooling was activated in multiple rooms in order to engage all ASHPs within the enclosure.

It was ensured that the ASHPs operated at a typical level. It was confirmed that all eight units were active at the same time. This is considered worst-case as typically two units are for emergency use only.

The survey was conducted between the following periods:

- 08:18 – 08:39 Thursday 2nd July 2026.

The following noise measurement position was chosen for the Noise Survey:

- Noise Measurement Position 1 (NMP1): Located approximately 3 m from the façade/doors of the enclosure on the northern elevation. The microphone was located at a height of 1.4 m above ground level and in free-field conditions. The sound climate was dominated by road traffic on the local road network, birdsong and very low-level noise from the ASHPs.

A summary of the measured sound pressure levels is presented in Table 3.1. The measured $L_{Aeq,T}$ values include contributions from the ASHP installation and the prevailing residual sound environment.

Table 3.1 Attended ASHP Noise Measurement Results

MEASUREMENT PERIOD	DOOR TO ENCLOSURE	MEASURED SOUND PRESSURE LEVEL, $L_{Aeq,T}$ (dB)	COMMENTARY
08:18-08:24	Door open	51.4	Surrounding traffic, birdsong, low level plant just audible
08:24-08:29		49.5	
08:29-08:34	Door closed	47.9	
08:34-08:39		48.2	

The surveyor attended the boundary with the residential dwellings and ASHP noise was not audible.

The equipment outlined in Table 3.2 was used for the noise survey.

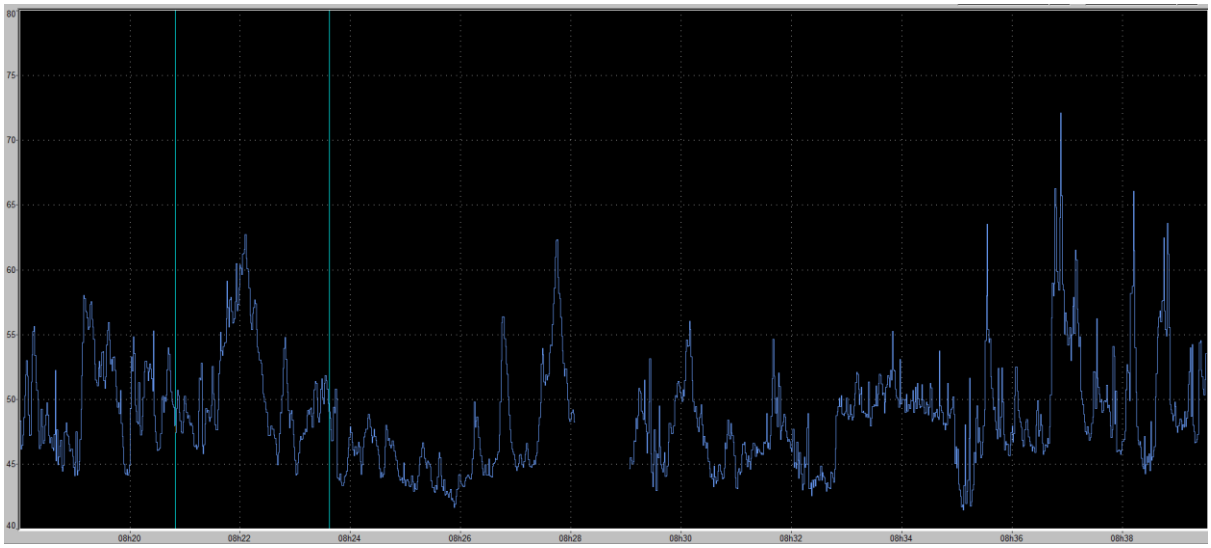
Table 3.2 Noise Measurement Equipment and Calibration Dates

MEASUREMENT POSITION	EQUIPMENT DESCRIPTION	MANUFACTURER AND TYPE NUMBER	SERIAL NUMBER	CALIBRATION DUE DATE
NMP1	Sound Level Meter	Fusion	14226	17/12/2027
	Pre-amplifier	Pre22	2135072	
	Microphone	40CD	470570	
	Calibrator	CR 515	99204	13/08/2026

The sound level meter was field calibrated before and after measurements with no significant drift witnessed.

4. ASSESSMENT

Throughout the measurement periods, the measured sound environment was controlled primarily by surrounding road traffic, birdsong and other residual environmental sources. Indeed, the time history of the measurements are given below:



As shown, noise is controlled by individual events with no steady state sound noted on the above time history.

Although the ASHPs were operational, their contribution was subjectively very low and could not be reliably distinguished from the prevailing residual sound at NMP1. At the boundary with the neighbouring residential dwellings, noise from the ASHP installation was not audible.

The one-minute measurement data presented in Appendix A show variation in the measured $L_{A90,1min}$ levels throughout the survey. The $L_{A90,1min}$ levels ranged from 42.4 to 48.1 dB during the door-open measurement.

A dominant and readily identifiable steady-state plant source may generally be expected to produce a more consistent lower sound level during otherwise quieter periods. The observed variation is instead consistent with the surveyor's observations that the measured sound environment was influenced by variable road traffic, birdsong and other surrounding sources.

The $L_{A90,1min}$ results do not allow the ASHP contribution to be quantified independently. However, when considered alongside the subjective observations, they provide supporting evidence that the ASHPs did not control the measured sound environment.

As the ASHP contribution was below the level at which it could be reliably separated from the prevailing residual sound, the actual sound level attributable solely to the ASHP installation must be lower than the combined levels reported in Table 4.1.

The absence of audible ASHP noise at the residential boundary also indicates that the completed installation is not producing a material noise impact at the nearest noise-sensitive receptors.

E3P considers that the completed ASHP installation is operating in accordance with the intent and conclusions of the approved Noise Impact Assessment.

No evidence of a material adverse noise impact or non-conformity with the approved acoustic mitigation measures was identified during the verification survey.

E3P therefore considers that the noise-related requirements of Condition 4 have been satisfactorily addressed.

I trust the information provided in this letter report is satisfactory however if there is anything further, please do not hesitate to contact me.

Yours sincerely,
For and on behalf of E3P Ltd

Ollie Harrison
Acoustic Consultant

APPENDIX A –

Table A presents the measured one-minute $L_{A90,1min}$ levels during the enclosure door-open measurement.

The variation in the results supports the site observations that the measured sound environment was influenced by variable surrounding sources, including road traffic and birdsong, rather than being controlled by a clearly identifiable steady-state contribution from the ASHP installation.

The data should not be interpreted as a direct measurement of the ASHP sound level, as no controlled plant-off residual measurement was undertaken.

Table A – Measured $L_{A90, 1min}$ Data – Door Open

MEASUREMENT PERIOD	$L_{A90, 1 min}$ (dB)
02/07/2026 08:18	45.1
02/07/2026 08:19	44.5
02/07/2026 08:20	47.2
02/07/2026 08:21	46.4
02/07/2026 08:22	46.9
02/07/2026 08:23	43.8
02/07/2026 08:24	43.8
02/07/2026 08:25	42.4
02/07/2026 08:26	43.8
02/07/2026 08:27	44.8
02/07/2026 08:28	48.1